

CLAIMS

1. A method of treating nerve damage comprising administering to a subject in need thereof an effective non-toxic amount of an MGF (mechano-growth factor) Insulin-like Growth Factor I (IGF-I) isoform comprising amino acid sequences encoded by nucleic acid sequences of IGF-I exons 4, 5 and 6 in the reading frame of MGF and having the ability to reduce motoneurone loss by 20% or greater in response to nerve avulsion, by localisation of said MGF at the site of said damage.
2. A method of claim 1 wherein said nerve damage is to a nerve of the peripheral nervous system (PNS).
3. A method of claim 1 wherein said MGF is localised at said site of the damage by means of a conduit placed around the nerve at said site of said damage.
4. A method of claim 3 wherein said conduit comprises Poly-3-hydroxy-butyrate (PHB).
5. A method of claim 1 wherein said damage comprises the severing of the nerve
6. A method of claim 2 wherein said treatment of said nerve damage is combined with a treatment that prevents or diminishes degeneration of the target organ which the damaged nerve innervates.
7. A method of claim 6 wherein said target organ is a muscle and treatment of the muscle with MGF or a polynucleotide encoding MGF prevents or diminishes degeneration.

8. A method of claim 6 wherein treatment of the target organ with a polypeptide growth factor than than MGF prevents or diminishes degeneration.
- 9 A method of claim 1 wherein said MGF has the ability to reduce motoneurone loss by 50% or greater or 80% or greater in response to nerve avulsion
10. A method of claim 1 wherein said MGF is unglycosylated
11. A method of claim 1 wherein said MGF has:
 - (a) the sequence of Human MGF (SEQ ID NO. 2, Rat MGF (SEQ ID NO. 4) or Rabbit MGF (SEQ ID NO. 6),
 - (b) a sequence having 70% or greater homology to a sequence of (a);
 - (c) a sequence comprising the amino acids encoded wholly or partly by exons 4, 5 and 6 of human, rat or rabbit MGF DNA of SEQ ID NO. 1, 3 or 5, or a sequence having 70% or greater homology thereto; or
 - (d) a sequence encoded by a nucleic acid sequence capable of selectively hybridising to a sequence of (a), (b) or (c).
- 12 A method of claim 1, further comprising treatment with another neurologically active agent MGF is carried out in combination with said MGF.
13. A kit for the treatment of nerve damage comprising:
 - (a) an MGF IGF-I isoform;
 - (b) a conduit adapted to be placed around a damaged nerve of the site of said damage;
 - (c) a further polypeptide growth factor which prevents or diminishes degeneration; and optionally
 - (d) another neurologically active agent.

SEQUENCE LISTING

<110> GOLDSPINK, GEOFFREY

<110> TERENGHI, GIORGIO

<120> TREATMENT OF NEUROLOGICAL DISORDERS

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<170> PatentIn Ver. 2.1

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N.82201 US GCW AB ntw Specification as filed

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